IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1.　(Currently Amended) A data multiplexing apparatus comprising:

a plurality of buffers for respectively storing a plurality of inputted data, each of said plurality of buffers including a start sync code detecting section, a serial data buffer and a byte alignment section;

a storage quantity detecting means for detecting data storage quantities of said plurality of buffers;

output data generating means for generating a plurality of outputted data by effecting a data quantity reduction processing on data stored in said plurality of buffers; and

data multiplexing means for obtaining multiplexed data by multiplexing said plurality of outputted data.

2.　(Original) A data multiplexing apparatus as claimed in claim 1, wherein said output data generating means generates said plurality of outputted data by effecting a data quantity reduction processing on the data stored in said plurality of buffers in response to the data storage quantities of said plurality of buffers and the transmission rate concerning said multiplexed data.

3. (Original) A data multiplexing apparatus as claimed in claim 1, wherein said output data generating means generates said plurality of outputted data by effecting a data quantity reduction processing on the data stored in said plurality of buffers in response to the data storage quantities of said plurality of buffers and priorities of said plurality of inputted data.

4. (Original) A data multiplexing apparatus as claimed in claim 1, wherein said plurality of inputted data are data compressed by using a discrete cosine transformation and said output data generating means reduces said data quantity by discarding high-order coefficients of said discrete cosine transformation.

5. (Original) A data multiplexing apparatus as claimed in claim 1, wherein said output data inputted data are parallel data of byte unit and said buffers are serial buffers and said data multiplexing apparatus further comprises parallel-to-serial converting means for converting said inputted data in the form of parallel data of byte unit to serial data and serial-to-parallel converting means for converting data read out from said buffer in the form of serial data to parallel data of byte unit and wherein said output data generating means reduces said data quantity by selectively reading out data stored in said serial data buffer.

6.   (Currently Amended) A data multiplexing apparatus as claimed in claim 5, wherein said inputted data are MPEG2 encoded data and said ~~data multiplexing apparatus further comprises a~~ start sync code detecting ~~means for detecting~~ <u>section detects</u> a start sync code from said encoded data and <u>said</u> byte alignment ~~means for controlling~~ <u>section controls</u> said serial-to-parallel converting means based on a detected output from said start sync code detecting ~~means~~ <u>section</u> such that said outputted data complete byte data in front of said start sync code.

7.   (Original) A data multiplexing apparatus as claimed in claim 1, wherein said inputted data is parallel data of one byte width and said buffer is a parallel data buffer and said data multiplexing apparatus further comprises a data analyzing section for analyzing said inputted data and generating data indicative of validity or invalidity of bit data of each byte stored in said parallel data buffer in response to a plurality of data reduction ratios and a plurality of bit enable buffers for respectively storing said data indicative of validity or invalidity generated in response to said plurality of data reduction ratios and wherein said output data generating means selects any one of said plurality of bit enable buffers in response to said buffer data storage quantity and outputs said outputted data by only producing valid bit data from the bit data of each byte of data read out from said buffer on the basis of data from said selected bit enable buffer.

8.   (Original) A data multiplexing apparatus as claimed in claim 7, wherein said inputted data are MPEG2 encoded data and said data multiplexing apparatus further comprises start code detecting means for detecting a start code from said encoded data and byte alignment means for controlling said outputted data on the basis of the detected output from said start code detecting means such that byte data are completed in front of said start code.

9.   (Currently Amended) A data multiplexing method comprising the steps of:

storing a plurality of inputted data in a plurality of buffers, respectively, each of said plurality of buffers including a start sync code detecting section, a serial data buffer and a byte alignment section;

detecting storage quantities of said plurality of buffers, respectively;

obtaining a plurality of outputted data by effecting a data quantity reduction processing on the data stored in said plurality of buffers in response to the data storage quantities of said plurality of buffers; and

generating multiplexed data by multiplexing said plurality of outputted data.

10.   (Original) A data multiplexing apparatus as claimed in claim 9, wherein said process for generating said plurality of outputted data generates a plurality of outputted data by effecting a data quantity reduction processing on the data stored in said plurality of buffers in response to the data storage quantities of said plurality of buffers and a transmission rate concerning said multiplexed data.

11. (Original) A data multiplexing apparatus as claimed in claim 9, wherein said process for generating said plurality of outputted data generates a plurality of outputted data by effecting a data quantity reduction processing on the data stored in said plurality of buffers in response to the data storage quantities of said plurality of buffers and priorities of said plurality of inputted data.

12. (Original) A data multiplexing apparatus as claimed in claim 9, wherein said plurality of inputted data are data compressed by using a discrete cosine transformation and said process for generating said plurality of outputted data reduces said data quantity by discarding high-order coefficients of said discrete cosine transformation.

13. (Original) A data multiplexing apparatus as claimed in claim 9, wherein said inputted data are parallel data of byte unit and said buffer is a serial data buffer and said data multiplexing method further comprises the steps converting said inputted data in the form of parallel data of byte unit to serial data and inputting said serial data into said buffer and converting the data read out from said buffer in the form of serial data to parallel data of byte unit and generating said parallel data as said outputted data and wherein said process for generating said plurality of outputted data reduces said data quantity by selectively reading out stored data from said serial data buffer in response to the data storage quantity of said buffer.

14.   (Currently Amended) A data multiplexing apparatus as claimed in claim 13,

wherein said inputted data are MPEG2 encoded data and said ~~data multiplexing method further~~

~~comprises the steps of detecting a~~ plurality of buffers detect said start sync code from said

encoded data and ~~controlling~~ control said outputted data on the basis of said detected start sync

code such that byte data is completed in front of said start sync code.

15.   (Original) A data multiplexing apparatus as claimed in claim 9, wherein said

inputted data are parallel data of one byte width and said buffer is a parallel data buffer and said

data multiplexing method further comprises the steps of generating data indicative of validity or

invalidity of bit data of each byte stored in said parallel data buffer and storing said data

indicative of said validity or invalidity generated in response to said plurality of data reduction

ratios in a plurality of bit enable buffers and wherein said process for obtaining said plurality of

outputted data selects any one of said plurality of bit enable buffers in response to said buffer

data storage quantity and generating said outputted data by reading only valid bit data from the

bit data of each byte of the data read out from said buffer on the basis of data from said selected

bit enable buffer.

16.   (Original) A data multiplexing apparatus as claimed in claim 15, wherein said

inputted data are MPEG2 encoded data and said data multiplexing method further comprises the

steps of detecting a start code from said encoded data and controlling said outputted data on the

basis of said detected start code such that byte data are completed in front of said start code.

17.   (Currently Amended) ~~In a~~ A data transmitting apparatus including a data multiplexing section for generating multiplexed data by multiplexing a plurality of inputted data and a data transmitting section for transmitting said multiplexed data, said data multiplexing section comprising:

a plurality of buffers for storing a plurality of inputted data, each of said plurality of buffers including a start sync code detecting section, a serial data buffer and a byte alignment section;

a storage quantity detecting means for detecting data storage quantities of said plurality of buffers;

output data generating means for generating a plurality of outputted data by effecting a data quantity reduction processing on data stored in said plurality of buffers in response to data storage quantities of said plurality of buffers; and

data multiplexing means for obtaining multiplexed data by multiplexing said plurality of outputted data.

18.   (Original) A data transmitting apparatus according to claim 17, further comprising a plurality of encoders for generating a plurality of inputted data.